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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,399	10/31/2001	Roger Bruce Harding	1313/1H506-US1	1039

7590 08/22/2003

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EXAMINER

KHARE, DEVESH

ART UNIT	PAPER NUMBER
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1623

DATE MAILED: 08/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/002,399	HARDING ET AL.
Examiner	Art Unit	
Devesh Khare	1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-93 is/are pending in the application.
- 4a) Of the above claim(s) 1-41,46-60,62-73 and 75-84 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 42-45,61,74 and 85-93 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement:

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4,6,8</u> .	6) <input type="checkbox"/> Other: _____.

Applicant's election with traverse of the cellulose ether compounds defined by Group I in Paper No. 9 is acknowledged. The traversal is on the ground(s) that " a careful search of the prior art relevant to the claims of Group I would develop the prior art relevant to the claims of Groups II and Group III, since the product recited in the claims of Group I is made by the process recited in the claims of Groups II and III". This is not found persuasive because the applicants' claims encompass the carboxymethyl cellulose compound and two different methods of preparation, which would be burdensome to the examiner, as it cannot be assumed that the chemical reactions for one method of preparation would be same for another method of preparation.

The requirement is still deemed proper and is therefore made FINAL.

The claims which read upon the elected invention are 42-45,61, and 74. The newly added compound claims 85-93 have been rejoined with the elected invention of Group I. Claims 1-41, 46-60, 62-73 and 75-84 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claims 42-45,61,74 and 85-93 are currently pending in this application.

**Claim dependence**

Claims 42-45, 61 and 74 are objected to because of the following informalities:

Claim 42 depends from non-elected claim 38.

Claim 43 depends from non-elected claim 39.

Claim 44 depends from non-elected claim 40.

Claim 45 depends from non-elected claim 41.

Claim 61 depends from non-elected claim 46.

Claim 74 depends from non-elected claim 62.

The claims 42-45, 61 and 74 should be amended to depend from pending elected claim(s).

**35 U.S.C. 112, second paragraph rejection**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

*The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.*

Claims 88-92 are rejected under the second paragraph of 35 U.S.C. 112, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(A) The phrase, in claims 91 and 92 “total crystallinity”, is not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

(B) The term “Rx” in claims 88-90 is vague and indefinite. The term “Rx” is not particularly defined in terms of the cellulose pulp. The term “Rx” in all occurrences renders the claims in which it appears indefinite, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claims which depend from an indefinite claim which fail to obviate the indefiniteness of the claim from which they depend are also seen to be indefinite and are also rejected for the reasons set forth supra.

### **Claim Rejections - 35 USC § 102**

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 42-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Omiya (U.S. Patent 4,508,894).

Claims 42-45 are directed toward a carboxymethyl cellulose (CMC) ether, a methyl cellulose ether, a non-ionic cellulose ether and an ionic cellulose ether respectively. It is noted that each of claims 42-45 is a product-by-process claim.

Omiya discloses the carboxymethyl cellulose ether and process for preparing the same (see abstract). Omiya discloses the cellulose ether, prepared by reacting cellulose with monochloroacetic acid in the presence of a water-soluble alkali (see col. 1, lines 12-16). Omiya discloses the crude partial acid-type CMC containing a carboxymethyl cellulose ether, a methyl cellulose ether, a non-ionic cellulose ether and an ionic cellulose ether (see col. 5, lines 30-45). Therefore Omiya's cellulose ethers anticipate the cellulose compounds of claims 42-45.

Claims 61 and 74 are rejected under 35 U.S.C. 102(b) as being anticipated by Morse (U.S. Patent 4,269,859).

Claims 61 and 74 are drawn to a cellulose floc. It is noted that each of claims 61 and 74 is a product-by-process claim.

Morse discloses the cellulose floc granules and process (see abstract). Morse discloses the cellulose floc granules and their characteristics in examples 11-13 (see cols. 6 and 7). Therefore Morse's cellulose flocs are seen to anticipate applicants' claimed invention.

The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

### **35 U.S.C. 103(a) rejection**

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

Claims 85-93 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edelman et al. (U.S. Patent 4,941,943).

Claims 85-93 are drawn toward a carboxymethyl cellulose derived from mercerized and recovered cellulose pulp having atleast about 20% by weight cellulose II, based upon 100% total weight of the crystalline portion of the mercerized cellulose pulp. Additional claim limitations include atleast about 35% and 60% by weight of cellulose II, cellulose

pulp having an Rx value of greater than 0.57, 0.60 and 0.64, cellulose pulp having a total crystallinity of less than about 60% and 45% by weight and cellulose pulp comprising less than 20% by weight of moisture content.

Edelman et al. teach a method and an equipment for preparing sodium carboxymethyl cellulose from mercerized and recovered cellulose pulp (see abstract).

Edelman et al. disclose the mercerization of the cellulose pulp having a consistency of 20-35% for the production of carboxymethyl cellulose (col. 2, lines 15-20 and 38-40).

Edelman et al. disclose the production of carboxymethyl cellulose in example 1, col.3.

Edelman et al. differs from the applicant's invention that Edelman et al. do not provide the explicit example of mercerized and recovered cellulose pulp having up to 60% by weight cellulose II, having an Rx value up to 0.64, having total crystallinity of less than about 60% and comprising less than 20% by weight of moisture content, used for the production of carboxymethyl cellulose. However, it is noted that Edelman et al. used the cellulose pulp having a 92% alpha content for mercerization (col.3, example 1, lines 26-28). Use of a known member of a class of materials in a process is not patentable if other members of the class were known to be useful for that purpose, even though results are better than expected.

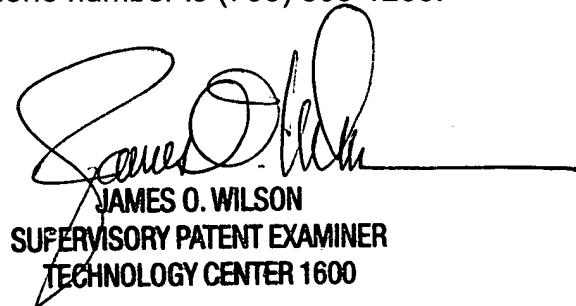
It would have been obvious to person having ordinary skill in the art at the time the invention was made, to select mercerized and recovered cellulose pulp to produce sodium carboxymethyl cellulose as taught by Edelman et al, because Edelman et al. had disclosed the mercerization of cellulose to achieve accessibility and homogeneity before the cellulose is activated with NaOH to produce carboxymethyl cellulose (see

col. 1, lines 11-20). Applicant has not demonstrated any criticality or unexpected result, which stems from selection of mercerized and recovered cellulose pulp to produce sodium carboxymethyl cellulose.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Devesh Khare whose telephone number is (703)605-

1199. The examiner can normally be reached on Monday to Friday from 8:00 to 4:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson, Supervisory Patent Examiner, Art Unit 1623 can be reached at 703-308-4624. The official fax phone numbers for the organization where this application or proceeding is assigned is (703) 308-4556 or 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.



JAMES O. WILSON  
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Devesh Khare, Ph.D.,JD(3Y).  
Art Unit 1623  
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